February 4, 2006

To: The Federal Communications Commission

From: Douglas B. Burlew
Amateur Radio Service General Class Licensee KA3TGV
43 Cedar Drive
Lewistown, Pennsylvania 17044

Re: RM-11306

To Whom it may Concern:

I respectfully request RM-11306 be denied. If adopted, RM-11306 will result in additional burdensome regulation for Amateur Radio Service licensees. The current Part 97 regulations, cluttered in their present form, become less viable if this petition is adopted.

If RM-11306 is adopted a greater proliferation of Amateur Service subbands will result and the Amateur Service will become less usable for the majority of active radio amateurs.

As good reasons for the dismissal of RM-11306, I, Douglas B. Burlew, Amateur Radio Service General Class Licensee KA3TGV, state the following:

I. Introduction

Briefly, the premise of RM-11306 is to eliminate regulation by mode of emission in the Amateur Radio Service and replace it with regulation by maximum necessary signal bandwidth, and also to eliminate digital mode symbol rate limitations as described in 47 C.F.R. 97.307. This opens the door for e-mail, multimedia, and perhaps internet access transmitted on the amateur bands via automatically or semi-automatically controlled robotic transmitters in the affected subbands.

The lax state of the regulations governing third party communications (47 C.F.R. 97.115) in the Amateur Service preclude the orderly implementation of the regulations proposed in Appendix A of RM-11306 and will create havoc for incumbent amateur users of these subbands if adopted.

II. RM-11306 is Incomplete

RM-11306 does not present a very strong argument for adoption of this petition, and fails to show how it is in the public interest, convenience, and necessity. A distillation of the petitioner's argument for the adoption of RM-11306 is 'trust us- adopt this'.

Appendix A of RM-11306 lists the proposed rule changes. On page 19 of RM-11306, the petitioner states, "ARRL is firmly committed to completing a competent and acceptable band plan to accompany the rule changes proposed herein". For the purposes of interested parties weighing the merits of RM-11306, it would have been helpful if the band plan had been publicized concurrently with submission of the petition for rulemaking assigned RM-11306. The devil, it appears, is in the unsubmitted details.

By not making a reasonable attempt to communicate to the population of active radio amateurs the scope of the changes proposed for the Amateur Radio Service by RM-11306, how it affects their participation in the Service, and by not taking into consideration the quantity of usable amateur equipment (some of it representing a substantial investment of time and money) facing accelerated obsolescence if RM-11306 is adopted, the petitioner is being less than forthright.

RM-11306 requests a major shift in how the Amateur Radio Service is regulated and if adopted will ultimately result in the displacement of the incumbent users of the Service. Although the requested rule changes may appear innocuous, their adoption will have unfortunate consequences.

III. No Wideband Signals at 30 Meters

Page 17 of RM-11306 states:

30 m band: This proposes 200 Hz, 500 Hz, and 3.5 kHz bandwidths. While telephony is not encouraged in this band due to the relatively narrow, secondary allocation status of the Amateur Service, this can best be regulated by voluntary band planning.

According to the proposed 47 C.F.R. 97.305(e) found on pages 22 and 23 of RM-11306, single-sideband amplitude modulation (S.S.B.) and double-sideband amplitude modulation (A.M.) would be permitted to operate at 30 meters in the proposed 3.5 kHz maximum bandwidth subband from 10.135 to 10.150 megaHertz. This sort of operation would presumably be discouraged by the unsubmitted voluntary bandplan that carries no regulatory status. Allowing the potential for radiotelephony at 30 meters seems to contradict statements from The ARRL's FCC Rule Book, 12th edition, pages 4-9 and 4-10:

30 METERS: 10.100-10.150 MHZ

Like 40 meters, 30 meters is primarily a night time band and amateurs are limited to CW (intermittently keyed Morse telegraphy) *only.*
Sharing arrangements: The Amateur Radio Service is secondary in this band to stations in the Fixed Service outside of the U.S. Amateurs must avoid causing harmful interference to these foreign fixed stations. If you do, you must be prepared to stop transmitting, if necessary, to eliminate interference (2.106, 97.303d).
License privileges: General, Advanced and Amateur Extra licensees have access to the entire segment, but are limited to 200 W PEP output using CW, RTTY (radioteletype) *and data transmissions only, with a maximum sending speed of 300 baud (97.301b,c,d; 97.305c; 97.307f3; 97.313c).*

The 30 meter amateur band is the one of the smallest (50 kiloHertz wide) bands assigned to the Amateur Radio Service in addition to being secondary to stations in the Fixed Service. Who or what is the driving force behind this push to permit wideband modes of emission, analog or digital, at 30 meters?

IV. RM-11306 Creates Additional Regulation for the Amateur Radio Service

In The ARRL's FCC Rule Book (12th edition, pages 4-7 through 4-15) the petitioner describes the amateur bands between 80 meters and 2 meters, with the exception of 30 meters, as consisting of two subbands. The first subband is designated 'CW-RTTY-data' and the predominant modes of emission are intermittently keyed Morse telegraphy (C.W.), radioteletype (R.T.T.Y.), and various digital modes. These modes of emission in this subband are generally considered narrow bandwidth modes, so an onerous system of regulation by signal bandwidth is the case at present and found in the Part 97 rules under 'Emission Standards' (47 C.F.R. 97.307).

The second subband is designated 'CW-phone-image' and among the modes of emission used are single-sideband amplitude modulation (S.S.B.), double-sideband amplitude modulation (A.M.), and slow-scan television (S.S.T.V.). These modes of emission are wider bandwidth signals than those found in the 'CW-RTTY-data' subbands and their standards of emission are also governed by 47 C.F.R. 97.307. Intermittently keyed Morse telegraphy is permitted on any frequency assigned to the Amateur Radio Service, with the exception of 60 meters.

A second set of subbands according to the class of amateur radio license held by the operator is also in effect. Presently, there are 5 license classes in the Amateur Radio Service. They are Novice,Technician, General, Advanced, and Amateur Extra. The overlay of the two mode-defined subbands with the license class subbands results in an overly complex matrix of mode-defined subband and operator license class.

With RM-11306, the matrix becomes larger and more unwieldly. In RM-11306, the two emission mode and bandwidth defined subbands are eliminated and replaced with up to three bandwidth-defined subbands (RM-11306, Appendix A, page 23). The increased number of bandwidth-defined subbands overlaid with the existing privileges of the 5 license classes results in an even larger and more cumbersome subband structure.

Streamlining and simplification ought to be the hallmarks of any petition for rulemaking. Unfortunately, RM-11306 takes an already encumbering subband structure and imposes additional burdensome regulation.

The temptation to eliminate subbands, be they by mode/bandwidth or license class, should be moderated in deference to the ongoing traditions of amateur radio, but with a philosophy of gradual changes in a definite and unwavering direction, which seems to be the Commission's objective in recent rulemaking. Stated differently, some changes to Amateur Radio Service subbands are needed but an accelerated program of deregulation in the Amateur Service at this time will probably result in a repeat of the wasted spectral opportunity that occurred at 11 meters with the deregulation of the Class D Citizen's Band.

V. Overcrowded Amateur Bands

Part of the problem with the current regulations is the way they inhibit dynamic operating frequency selection due to the 'CW-RTTY-data' subband of a given band being unnecessarily large resulting in overcrowding and interference complaints in the remainder 'CW-phone-image' subband. The size of the 'CW-RTTY-data' subbands is a holdover from decades past when intermittently keyed Morse telegraphy was the predominant mode of emission in the Amateur Radio Service.

The size of the 'CW-RTTY-data' subbands has been steadily shrinking over the years and could easily be reduced by 50% at this time. This liberated spectrum, added to the 'CW-phone-image' subbands in the particular band, could help ease overcrowding and might mitigate some of the interference complaints communicated to F.C.C. Amateur Enforcement. In any event, intermittently keyed Morse telegraphy should continue to be permitted on any frequency assigned to the Amateur Radio Service with the exception of 60 meters.

VI. The Inconsistent Application of Subbands Continues with RM-11306

Of particular interest are the petitioner's apparently incongruous statements "Because there is a strong tradition in the United States of restricting subbands by rule rather than purely through voluntary band

plans, complete elimination of regulatory band segments and complete reliance on informal band planning does not appear to be a suitable option in the United States" (RM-11306, page 9) and referring to 160 meters, "ARRL does not suggest band segmentation in this band by regulation, because generally, the use of voluntary band plans in lieu of mandated segmentation has, in this band in particular, been historically sufficient" (RM-11306, page 17).

A technical explanation of the physical properties and regulatory enviroment at 160 meters, compared and contrasted with the physical properties and regulatory environment at 80 meters through 2 meters, and how the differences in physical properties and regulatory environment affect the need for subbands, be they by mode of emission or maximum signal bandwidth, would make an interesting addendum to RM-11306.

VII. RM-11306 Proposes Additional Burdensome Regulation by Maximum Signal Bandwidth

It is worthwhile to note that under the current system there is, to borrow the petitioner's phrase, "... *no effective bandwidth limit* on HF digital operations" (RM-11306, page 11). For the sake of clarity, the definition of HF (high frequency) is the region between 3 megaHertz and 30 megaHertz. Signal bandwidth and emission standards are addressed in 47 C.F.R. 97.307. One has to question the desirability of imposing a more onerous regime of regulation by maximum signal bandwidth for analog modes of emission. What is the harm in experimenting with a wide bandwidth mode of emission, analog or digital, on an unused band such as 160 meters on a summer day or at 10 meters during solar cycle minima?

In the matter of the apriori 1296 modes of emission in the Amateur Radio Service, the petitioner summarizes, "Radio Amateurs cannot be expected to experiment with emissions not authorized for use in their Service" (RM-11306, page 6). This appears to be a concession by the petitioner that radio amateurs be permitted to experiment with developed modes of emission if enabled by the adoption of RM-11306. An implicit interpretation of this leads to a kind of de facto type acceptance for amateur modes of emission inveigling it's way into the Part 97 rules. It also appears to be another one of those sideways, crab-like movements toward the eventual implementation of F.C.C. Type Acceptance for equipment used in the Amateur Radio Service. Do we really want this?

A reasonable level of regulation to allow some latitude and flexibility for development of new communications technology, not limited to amateur experimentation with existing technology from the commercial sector, is appropriate. Regulation by maximum signal bandwidth, a cornerstone of RM-11306, will have a stifling effect on technical investigation and self-training.

The potential to straitjacket experimentation with analog modes of emission and wideband digital modes such as Digital Radio Mondial would be best avoided by denying RM-11306.

VIII. The Ethics of RM-11306

At present, S.S.B., A.M, analog voice frequency modulation (F.M.), and independent sideband (I.S.B.) are accorded status as permissible modes of radiotelephony. Under the proposed restrictive environment of RM-11306, provision is made for I.S.B. where a 6 kHz bandwidth is permissible (RM-11306, page 12) and F.M. is relegated to operating above 29.0 mHz (RM-11306, page 15). The petitioner might correctly argue I.S.B. and F.M. are seldom used in the Amateur Radio Service high frequency bands. Does a dearth of current activity using a particular mode of emission justify regulating it to another part of the amateur spectrum or otherwise restricting it's use?

A.M. is preserved via a sub-paragraph (RM-11306, Appendix A, page 24), assigned an arbitrary 9.0 kHz maximum bandwidth, and permitted to operate in the 3.5 kHz maximum bandwidth slots. Amateur A.M. has grown in popularity over the past twenty-five years from a fringe specialty to one of the most popular and fastest growing modes of emission used in the Amateur Radio Service. The A.M. mode of emission is included in all current manufacture state-of-the-art amateur band transceivers. It strains credulity the permissible status of the A.M. mode of emission would hinge on a sub-paragraph to the Part 97 rules as requested in RM-11306.

If a permissible mode of emission is not causing a problem, why regulate it to another part of the amateur spectrum or otherwise restrict it's use? How does a petition for additional regulation as exemplified by RM-11306 promote greater amateur experimentation, innovation, and furtherance of the radio art?

It appears the petitioner is asking a federal regulatory agency for special rules to enable the petitioner to pick winners and losers. In the private sector, the notion of a government agency adopting special regulations for this purpose has been largely discredited.

IX. The Pecuniary Interest

The petitioner's assertion of existing Part 97 rules inhibiting experimentation with the digital modes is arguable. Part 97 has never been so liberalized, although it can always be improved. Any good faith effort to follow the Part 97 rules when experimenting with a new mode of emission is greeted with the appropriate consideration. A mode of emission with a high data content is going to require greater bandwidth, longer transmission time, better software, or perhaps a mix of all three and might

belong at 33 centimeters and down. The Amateur Radio Service has a vast universe of spectrum in the eleven Amateur Bands from 33 centimeters to 1 millimeter, as well as all frequencies above 300 gigaHertz. The lower frequency Amateur Radio Service assignments from 160 meters to 70 centimeters are generally well utilized and not suitable for spectrum-hungry multimedia modes. In addition, effects of the changing ionosphere and troposphere on radio wave propagation in the bands from 160 meters to 70 centimeters tend to preclude their use as a viable transmission medium for some of the digital and multimedia modes.

What is the nature of the digital and multimedia amateur communications requiring relaxation of symbol rate limitations as is proposed in RM-11306? Are these types of communications better suited for transmission by commercial entities? Where is the boundary between amateur intercommunication and commercial communications with a pecuniary interest?

Burdensome regulation as is proposed in RM-11306 will have a negative effect on the Amateur Radio Service, perhaps eventually marginalizing it to an over-the-air medium of transmission for e-mail, multimedia, and possibly internet service. Very little of what is proposed in RM-11306 incentivizes the development of new communications technology, rather the petitioner seeks to implement the use of technology from the commercial sector on the lower frequency amateur radio bands between 160 meters and 70 centimeters. This goes to the heart of the definition of the Amateur Radio Service, as outlined in 47 C.F.R. 97.3 (4):

Amateur service. A radiocommunication service for the purpose of self-training, intercommunication and technical investigations carried out by amateurs, that is, duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest.

X. Digital Multimedia Technology and Emergency Communications

RM-11306 states "It is now necessary to permit higher data rates, in order to permit the development of digital multimedia technology, which is now coming into use in the Amateur Radio Service, and which has great promise for improving and fostering more effective emergency and disaster relief communications" (RM-11306, page 7). The United States of America is a modern, post-industrial nation. Local emergency communications services have been ubiquitous for years. Management and workforce representatives of emergency communications services are understandably reluctant to allow unbonded amateur volunteers perform emergency communications.

A more likely scenario for meaningful deployment of amateur volunteers would be the case of a large scale disaster serious enough to

render local emergency communications inoperative. A massive weather-related event such as Hurricane Katrina comes to mind as do the events in Lower Manhattan on September 11, 2001. In the case of a nuclear attack, the ensuing electromagnetic pulse (E.M.P.) might render the power grid and all transistorized solid-state equipment inoperative, unless it has been specifically hardened against E.M.P. as in the case of some military electronics. Try to imagine the working conditions for volunteer emergency communicators in such a situation; the power grid is down, there is no gasoline to run generators, no electricity to charge batteries for laptop computers and amateur transceivers, and the equipment might remain inoperative because microprocessor-based electronics, whether for amateur or commercial markets, may be negatively impacted by an electromagnetic pulse. In a real emergency a basic system stands a better chance of providing emergency communications.

The notion of amateur volunteers providing full duplex e-mail and possible internet access transmitted wirelessly on the 160 meter through 70 centimeter amateur bands (if permitted by the adoption of RM-11306), using unshielded, power-hungry laptop computers and amateur transceivers, and then having to propose unsubstantiated changes to the Amateur Radio Service to facilitate this, appears impractical due to manufacturing cost limitations of amateur and commercial electronic equipment.

XI. Third Party Communication Rules should be Revisited

Liberalized third party communication rules appear to be the foundation on which RM-11306 hopes to blossom. Third party communication rules with respect to the Amateur Radio Service have been relaxed over the years and have the potential for grave detriment to the Service, particularly if RM-11306 is adopted.

In recent years the Amateur Radio Service appears to be devolving to a quasi-commercial or quasi-governmental service. This is not a healthy development and left unchecked will result in the absorption of the Amateur Radio Service by commercial or government interests when there is a distinction without a difference.

Implicit with the adoption of RM-11306 is the potential for abuse due to the commercial or potentially pornographic nature of internet multimedia and some e-mail programs and attachments, which could conceivably be sent over frequencies assigned to the Amateur Radio Service. There appears to be little question third party communication rules need to be tightened to prevent this kind of issue from surfacing.

The following passage is from petitioner's The FCC Rule Book, 8th edition, page 13-12:

It was not until the 1930's that international limitations were placed on amateur traffic, at the insistence of the European governments for whom the telecommunications monopoly was a source of considerable revenue. While handling messages or providing communications for material compensation always has been prohibited in Amateur Radio, it was not until 1972 that the FCC specifically prohibited "business communications" in Docket 19245 and thus began to regulate amateur traffic on the basis of its content. Amateurs, for the first time, were in the position of having to evaluate the content of the messages they were relaying.

It was true that the permissive rules in force prior to 1972 left Amateur Radio open to possible commercial exploitation; well-meaning amateurs anxious to be of service could be persuaded to operate their stations for someone else's commercial or private benefit, as long as they themselves were not compensated for providing the service. At the time this abuse was more hypothetical than real, but the years since 1972 have brought increased communications capabilities to amateur stations as well as increased demands for certain kinds of services on behalf of third parties. By and large, while there have been some difficulties arising from the unavoidable "grey area" between business and personal communications and from occasional overzealous interpretations of what constitutes business communication, the prohibition on non-emergency business communications in Amateur Radio has not caused serious problems for amateur licensees. However, the FCC is currently taking another look at the third-party traffic rules as part of its effort to resolve some problems it perceives on the amateur bands. The privilege is tenuous at best, and it is important that amateurs obey the letter and spirit of the third-party traffic rules in order to keep it.

The relevant sections of Part 97 deleted or modified years ago when the current advances in digital and multimedia modes of emission were unforseen should be revisited and probably reinstated. The regulations are found in petitioner's The Radio Amateur's License Manual, 78th edition, on pages 9-15 and 9-17:

97.103(b)(2) A notation of third party traffic sent or received, including names of all third parties, and a brief description of the traffic content. This entry may be in a form other than written, but one which can be readily transcribed by the licensee into written form.

97.114 Third party traffic.
The transmission or delivery of the following amateur radiocommunications is prohibited:
(b) Third party traffic involving material compensation, either tangible or intangible, direct or indirect, to a third party, a station licensee, a control operator, or any other person.
(c) Except for an emergency communication as defined in this part, third party traffic consisting of business communications on behalf of any party. For the purpose of this section business communication shall mean any transmission or communication the purpose of which is to facilitate the regular business or commercial affairs of any party.

XII. Problems with the Development of RM-11306

A flawed process will predictably produce a defective product and conversely, a competent process results in an acceptable product. The former appears to be the case with RM-11306.

In recent years, the petitioner claims they are the "National Association for Amateur Radio". The petitioner can claim approximately 20% of U.S. Amateur Radio Service licensees as members of their organization. During the development of this petition the petitioner set up a blind e-mail address for members and other interested parties to submit their thoughts on regulation by maximum signal bandwidth. There was no published tabulation of the comments.

During my correspondence with a staff member at the petitioner's headquarters during the development of this regulation by bandwidth petition, the staffer wrote:

"...there are at least 170 comments in favor of the proposal as long as the 30 Meter band has a portion that allows 3 kHz digital comms. There are about 50 comments that simply said something along the lines of 'This is great, go for it' and there were over 150 comments that said they disagreed with the proposal and desired that it not be filed as written."

The appearance is a narrow interest group is lobbying the petitioner's national association for a 3 kiloHertz (kHz) maximum bandwidth subband at 30 meters for digital communications which would presumably be used to send and receive e-mail with or without attachments. Anecdotal evidence suggests a small percentage of active amateur radio licensees are in favor of the proposal now known as RM-11306. I am unaware of the results of any scientific polling conducted at the petitioner's behest by an outside, professional polling organization concerning the need or desire for regulation by maximum signal bandwidth in the Amateur Radio Service.

The petitioner either did not perform a study of band occupancy or did not publicize the results of such a study. The published results of a band occupancy study would have bolstered or disproved the petitioner's twin assertions "There is a pronounced trend in the Amateur Radio Service toward digital communications..." (RM-11306, page 3) and "We are in the early stages of a dramatic shift in Amateur operating patterns, especially in the High Frequency (HF) bands" (RM-11306, page 3).

The petitioner, perhaps with an eye to continuing operation of it's non-profit organization, appears to be casting about for new constituencies to finance their operations going forward. The idea of accessing e-mail from a remote location using amateur radio might have appeal to commercial travelers, recreational vehicle owners, power boaters, sailboat enthusiasts, back-packers and hikers, not to mention commercial concerns poised to market mature technology to these new amateur users. The adoption of RM-11306 is of seeming importance to the petitioner to perhaps further

their marketing efforts to the above-mentioned groups, who may obtain amateur radio licenses for the purpose of sending and receiving e-mail and attachments in the affected subbands, and who may also be persuaded to join the petitioner's national association.

XIII. Summary and Conclusion

- I respectfully request RM-11306 be denied.
- Third-party communication rules should be revisited and made more restrictive as per Docket 19245 (1972).
- Sections of the Part 97 rules eliminated or modified when the current advances in digital and multimedia modes of amateur emission were unforseen should be reinstated, specifically sections 97.103(b)(2), 97.114(b), and 97.114(c) as discussed in section XI of this letter.
- It is imperative Amateur Radio Service communications be free of commercial content and amateur communication consist of amateur-to-amateur intercommunication, except in the case of a bona fide emergency.
- The 'CW-RTTY-data' subbands at 80 meters through 2 meters (with the exception of 30 meters) should be reduced in size by 50% with the newly liberated spectrum added to the 'CW-phone-image' subband in the particular band. Intermittently keyed Morse telegraphy should remain a permissible mode of emission on any frequency assigned to the Amateur Radio Service, with the exception of 60 meters.
- No wideband modes of emission should be permitted at 30 meters, excepting the case of a genuine emergency.
- After these items are necessarily taken care of, the relaxation of symbol rate limitations on the digital modes can logically proceed.
- A small portion of the equivalent spectrum created by the "refarming" of the Novice Class subbands (proposed by currently pending F.C.C. WT Docket 04-140) could be assigned in the particular band as an experment to gauge the practicality of digital and multimedia modes of emission with relaxed symbol rate restrictions.

Respectfully Submitted, I am

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